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GEO 508.01: Fundamentals of Graduate Research

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University of Montana - Missoula

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Fundamentals of Graduate Research – autumn 2013

Fridays 10:10-11:50 AM, SC333

This course has a *Moodle* site.
Check the site for handouts and the most up-to-date information.

Instructor information

Joel Harper

Office: SC 317

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E-mail is the best way to reach me – I check it often including weekends and evenings.

Course objective

This course will develop skills needed to perform successfully as a graduate student in geosciences. Specific goals are to enhance the student's ability to: 1) design research projects having sound scientific methods, 2) write successful grant proposals, and 3) make effective written and oral presentations of research results to peers. The course will also provide a brief introduction to specialized tools for conducting research in the geosciences. The course is intended for first semester graduate students. Two credits.

Course Assignments and Grading

Required Elements

1. Write three research proposals.
2. Make a ~10 minute oral presentation on a research problem and hypothesis.
3. Create a poster using graphics software.
4. Create a website.
5. Complete written and reading assignments, such as peer reviews and writing exercises.
6. Actively participate in class discussions and peer review sessions.
7. Attend and evaluate all departmental guest lectures and thesis defenses.

Evaluation

Improving one's ability to design research projects and write successful proposals are skills most scientists strive to improve throughout their careers. Assessment will focus on the student's level of commitment to the course objectives partitioned as follows:

Proposals – 50%

Oral presentation – 20%

Peer reviews and other written assignments – 15%

Course participation – 15%

Course Text (this book, or something similar, is recommended)

The Craft of Scientific Writing
Michael Alley
Springer; 3rd edition (February 22, 2009)
ISBN-10: 0387947663
304 pages

Simplified schedule, subject to revision

Week	Meeting	Class Topic
1	Aug. 30	Introduction, degree requirements, equip. & facilities
2	Sept. 6	Joel in Greenland— <i>reading & writing assignments</i>
3	Sept. 13	Scientific method
4	Sept. 20	Proposal mechanics, funding sources
5	Sept. 27	Proposal panel review
6	Oct. 4	Literature and the publication process, library searching
7	Oct. 11	Computer Graphics, referencing, data viz/modeling
8	Oct. 18	Individual meetings on project/proposal
9	Oct. 25	Professional presentations: abstracts, posters, talks
10	Nov. 1	Joel in Finland—Senior grad student open forum
11	Nov. 8	Posters, presentations
12	Nov. 15	Poster session
13	Nov. 22	Talk rehearsals and critiques
14	Nov. 29	Thanksgiving break – individual meetings (M/T)
15	Dec. 2	Oral presentations (Dept. lecture Monday at 4)
16	Dec. 13	End of finals week (and AGU week)

UM's E-mail policy

The UM email policy requires that faculty “must use *only* UM assigned student email accounts for all email exchanges with students, since such communication typically involves private student information.” You are therefore required to send correspondence to us through your GrizMail account.

UM's Academic honesty policy

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at: www.umt.edu/SA/VPSA/index.cfm/page/1321.

Students with Disabilities

Whenever possible, and in accordance with civil rights laws, the University of Montana will attempt to provide reasonable modifications to students with disabilities who request and require them. Please feel free to setup a time with me to discuss any modifications that may be necessary for this course. For more information, visit the Disability Services for Students website at www.umt.edu/dss/.